

AMENDMENT TO THE CLAIMS

1. (Original) A method of identifying a superframe boundary comprising:

summing data vectors for each symbol in a plurality of superframes;

determining the summed data vector having the largest magnitude; and

indicating the superframe boundary at the symbol position correlating to the largest summed data vector.
2. (Original) The method of Claim 1, further comprising synchronizing a plurality of modems based on the superframe boundary.
3. (Original) The method of Claim 1, further comprising representing data tones for each symbol as the data vectors.
4. (Original) The method of Claim 3, further comprising combining the data tones of each symbol across the plurality of superframes.
5. (Original) The method of Claim 1, further comprising converting the summed data to power.
6. (Original) The method of Claim 5, further comprising comparing a current summed vector with previous summed vectors.

7. (Original) The method of Claim 6, further comprising setting a boundary flag when the current summed vector is greater than all the previous summed vectors.

8. (Original) The method of Claim 6, further comprising identifying a synchronization symbol based on the position of the boundary flag.

9. (Cancelled)

10. (Currently amended) ~~The method of Claim 9, further comprising~~ A method of aligning modems comprising:

~~determining a summed vector having the largest value to identify the position of the synchronization symbol;~~

identifying the position of a synchronization symbol in a superframe from the summed vector; and

aligning the symbols of each modem based on the position of the synchronization symbol.

11. (Original) The method of Claim 10, further comprising communicating between each modem using discrete multitone (DMT) symbols.

12. (Original) The method of Claim 11, further comprising converting the DMT symbols into data vectors.

13. (Original) The method of Claim 10, further comprising combining the data vectors over a plurality of superframes to create the summed vector.

14. (Currently amended) A communication system comprising:
a plurality of modems which communicate using a plurality of superframes, each of the plurality of superframes having a plurality of symbols, and
a synchronizer which identifies the position of the superframe boundary, wherein the plurality of modems align based on the superframe boundary,
wherein the synchronizer compares a summed data vector of each symbol time period of the plurality of superframes to determine the position of a synchronization symbol of the superframes.

15. (Original) The communication system of Claim 14, wherein the plurality of modems are ADSL modems.

16-17 (Cancelled)

18 (Currently amended) The communication system of Claim 14,~~[[17,]]~~ wherein the symbol position having the summed data vector with the largest value is the synchronization symbol position.

19. (Original) The communication system of Claim 14, wherein the plurality of modems communicate using discrete multitone symbols.

20. (Original) The communication system of Claim 14, wherein one of the plurality of modems communicates with a central office.